

issued



by the

SMITHSONIAN INSTITUTION
U. S. NATIONAL MUSEUM

Vol. 86

Washington: 1938

No. 3041

 REVISION OF THE NORTH AMERICAN BEETLES OF THE
 STAPHYLINID SUBFAMILY TACHYPORINAE—PART 2:
 GENUS COPROPORUS KRAATZ¹

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ABOUT the year 1858 both Kraatz and Motschoulsky, working independently, described and named a genus of Tachyporinae corresponding approximately to Erichson's Family I of *Tachinus*. To this genus Kraatz gave the name of *Coproporus* and Motschoulsky that of *Erchomus*. The identity of the two genera was soon recognized, but uncertainty as to the dates of publication, and therefore to the priority, resulted in opposing views by subsequent writers as to the proper name for the genus. LeConte, Fauvel, Sharp (1876), Eichelbaum, Bernhauer and Schubert, and Cameron have used *Coproporus*, whereas Horn, Sharp (1883), Fowler, Fall, and Leng have used *Erchomus*.

There have undoubtedly been previous investigations into this problem, but I believe no one has heretofore published the facts upon which the decision is based. The information outlined below was kindly supplied to me by A. Mequignon, member of the International Commission on Entomological Nomenclature.

Coproporus Kraatz was published in the *Naturgeschichte der Insecten Deutschlands*, vol. 2, Staphylinii, p. 399, which was issued definitely in the year 1857, though bearing the date 1858 on the title page. *Erchomus* Motschoulsky was published in the *Bulletin de la Société Imperiale des Naturalistes de Moscou*, vol. 31, no. 3, p. 218, which was issued in 1858, probably in February.

¹ Part 1: Genus *Tachyporus* Gravenhorst was published in *Proc. U. S. Nat. Mus.*, vol. 84, pp. 39-54, Nov. 17, 1936.

In 1877 the American species of this genus were monographed by Horn, who listed eight names and considered four to be valid. Since that time two new species have been described and one other reported from this country. Both the new species are now considered synonyms, and three new species are described.

In the original descriptions no genotypes of these genera are designated, and I have found no later designations. In order to fix the names permanently I hereby designate *Tachinus rutilus* Erichson as genotype of *Coproporus* Kraatz, and *Erchomus sanguinolentus* Motschoulsky as genotype of *Erchomus* Motschoulsky.

The material available includes approximately 775 specimens from North America and a considerable series of species from other parts of the New World. These comprise the United States National Museum collections and my own.

Genus COPROPORUS Kraatz

1857. *Coproporus* KRAATZ, Naturgeschichte der Insecten Deutschlands, vol. 2, p. 399, footnote. (Genotype: *Tachinus rutilus* Erichson, designated here.)

1858. *Erchomus* MOTSCHOULSKY, Bull. Soc. Imp. Nat. Moscou, vol. 31, pt. 3, p. 218.

1869. *Cilea* PANDELLE, Ann. Soc. Ent. France, ser. 4, vol. 9, p. 277. (Not J. DUVAL, 1857.)

Body broad; head inclined, not margined at the sides; antennae 11-segmented, feebly incrassate, inserted at the sides of the head; maxillary palpi filiform, last segment acuminate; labial palpi filiform, last segment longer; ligula bilobed; no ocelli; prosternum short; anterior tarsi 5-segmented, simple; anterior coxae conical, prominent; elytra longer than pronotum, generally extended beneath the body; mesosternum carinate; posterior coxae transverse, contiguous, free; first segment of hind tarsi moderate or short; tibiae fimbriate at tip with unequal spinules; abdomen feebly margined.

This is a large genus occurring throughout the world. In all, 181 species have been described from the New World, Europe, Africa, India, Australia, and the Philippine Islands.

KEY TO NORTH AMERICAN SPECIES OF COPROPORUS²

- | | |
|--|--------------------|
| 1. Pronotum punctate | 2 |
| Pronotum not punctate | 4 |
| 2. Elytra with a concavity at sides | 3 |
| Elytra without a concavity at sides | <i>lecontei</i> |
| 3. Elytra coarsely punctate | <i>ventriculus</i> |
| Elytra exceedingly minutely punctate | <i>infimus</i> |

² The punctation of the pronotum and elytra is sometimes very minute and requires a high magnification to be visible. Under low power the surface irregularities may appear to be punctures.

4. Pronotum and elytra strigulose-----	<i>inflatus</i>
Pronotum and elytra not strigulose-----	5
5. Elytra with a distinct concavity at sides-----	6
Elytra at most flattened at sides-----	7
6. Elytra distinctly punctate on disk-----	<i>rutilus</i>
Elytra not punctate on disk or very minutely and irregularly so-----	<i>laevis</i>
7. Elytra distinctly punctate on disk-----	<i>sparsus</i>
Elytra not punctate on disk or very minutely so-----	<i>arizonae</i>

COPROPORUS VENTRICULUS (Say)

1834. *Tachyporus ventriculus* SAY, Trans. Amer. Philos. Soc., vol. 4, p. 466.
 1837. *Tachyporus acuductus* KIRBY, Fauna Boreali-Americana, vol. 4, p. 90.
 1837. *Tachyporus affinis* KIRBY, Fauna Boreali-Americana, vol. 4, p. 91. (Not Sharp, 1883.)
 1839. *Tachinus gibbulus* ERICHSON, Genera et species staphylinorum . . . , p. 252.
 1840. *Tachinus ventriculus* (Say), ERICHSON, Genera et species staphylinorum . . . , p. 920.
 1846. *Tachyporus punctulatus* MELSHEIMER, Proc. Acad. Nat. Sci. Philadelphia, vol. 2, p. 32.
 1859. *Coproporus ventriculus* (Say), LECONTE, The complete writings of Thomas Say . . . , vol. 2, p. 583.
 1877. *Erchomus ventriculus* (Say), HORN, Trans. Amer. Ent. Soc., vol. 6, p. 108.
 1877. *Erchomus acuductus* (Kirby), HORN, Trans. Amer. Ent. Soc., vol. 6, p. 126.
 1877. *Erchomus affinis* (Kirby), HORN, Trans. Amer. Ent. Soc., vol. 6, p. 126.
 1877. *Erchomus gibbulus* (Erichson), HORN, Trans. Amer. Ent. Soc., vol. 6, p. 126.
 1877. *Erchomus punctulatus* (Melsheimer), HORN, Trans. Amer. Ent. Soc., vol. 6, p. 126.
 1884. *Erchomus flavidus* CASEY, Contributions to the coleopterology of North America, pt. 2, p. 141.
 1915. *Erchomus politus* MANEE, Ent. News, vol. 26, p. 175. (Not Sharp, 1876.)

Color piceous; antennae, trophi, prosternum, and legs testaceous; frequently paler in great part. Head obtrapezoidal, abruptly truncated and declivous in front of the eyes; surface above not distinctly punctulate but extremely minutely wrinkled, shining; gula wide but somewhat narrowed at middle, slightly elevated and convex. Antennae short, gradually expanding, segments 6-11 transverse, eleventh subequal to ninth and tenth together. Maxillary palpi short, stout; fourth segment longer than third but less thick and feebly tapering. Pronotum shining, minutely and irregularly punctulate. Mesosternum feebly carinate posteriorly, minutely strigulose. Surface of elytra uneven, distinctly punctate; with a broad concavity along the lateral margin; epipleurae inflexed against inner face of elytra. Abdomen feebly margined; the feeble punctures indistinct because of the minute reticulations, above and beneath. Eighth tergite of male 4-lobed, lobes triangular, median pair a little longer; eighth sternite broadly semicircularly notched, this and the three preceding segments flattened at middle throughout their length.

Eighth tergite of female with four short blunt lobes, the median pair slightly longer, all separated by narrow triangular excisions, lateral pair a little broader; eighth sternite with four lobes, the median pair broadly rounded, separated by a semicircular notch, and with four spinules on each, outer lobes shorter and more pointed and each with two or three long setae, a rudimentary third pair of lobes marked by a pair of long black setae on the lateral margins.

Type locality.—Pennsylvania.

Localities represented.—New Hampshire, Vermont, Massachusetts, Connecticut, New York, Pennsylvania, New Jersey, Maryland, District of Columbia, Virginia, North Carolina, Georgia, Florida, Kentucky, Tennessee, Louisiana, Ohio, Michigan, Wisconsin, Minnesota, South Dakota, Iowa, Nebraska, Missouri, Kansas, Texas, New Mexico, Arizona, Nevada, California, Oregon, Washington, Ontario, Manitoba. Also recorded from Indiana and West Virginia.

Remarks.—The type of this species has undoubtedly been lost. The Horn collection in the Academy of Natural Sciences of Philadelphia contains specimens from Pennsylvania, Louisiana, Michigan, Florida, and Arkansas. The variability of this species has given rise to the lengthy synonymy. The five specimens of *E. flavidus* in the Casey collection are uniformly pale, but any large series of this species contains similar immature specimens. No identified specimens of *ventriculus* have been found in the Casey collection. *E. politus* Manee is represented in the collection of the writer by four specimens collected at the type locality by Manee. I am not able to separate these from a large series of *ventriculus*. The Horn collection contains a specimen labeled "*Erchomus politus* Manee n. sp. Type."

COPROPORUS RUTILUS (Erichson)

1839. *Tachinus rutilus* ERICHSON, Genera et species staphylinorum . . . , p. 253.
 1855. *Tachyporus brevis* SCRIBA, Ent. Zeit. Stettin, vol. 16, p. 296. (Not Sharp, 1876.)
 1859. *Coproporus rutilus* (ERICHSON), KRAATZ, Archiv für Naturg., vol. 25, pt. 1, p. 59.
 1883. *Erchomus rutilus* (ERICHSON), SHARP, Biologia Centrali-Americana, Coleoptera, vol. 1, pt. 2, p. 304.
 1924. *Cilea rutilus* (ERICHSON), WOLCOTT, Insectae Portoricensis, p. 79.

Rufopiceous to piceotestaceous; base of antennae, trophi, legs, and often the pronotum testaceous. Head transverse, triangular in front, not abruptly declivous; surface smooth and shining; gula wide but narrowed at middle. Antennae shorter than the head and prothorax, segments 8-10 transverse, eleventh broad and flat, as long as the two preceding together. Fourth segment of maxillary palpi longer than third, as large at base and evenly conical. Pronotum smooth, shining, impunctate. Mesosternum feebly carinate posteriorly. Elytra

smooth, shining, sparsely but relatively coarsely punctured; with a distinct longitudinal concavity at the middle of the side, not close to the margin; epipleurae free from inner face of elytra but inflexed far above the horizontal. Abdomen feebly margined, generally very much retracted; sparsely and indistinctly punctate throughout, with minute reticulations. Eighth tergite of male with four narrow lobes, the median pair longer and separated by a shallow rounded incisure; eighth sternite with a broad triangular notch, the angles prolonged. Eighth tergite of female with four slender lobes, the median pair a little longer, the outer pair each with a long black seta; eighth sternite with four blunt lobes, the middle a little longer and with three spinules at tip, the outer each with a long black seta.

Type locality.—Originally cited from "Americae ins. Puerto Rico et St. Thomae, in Columbia."

Localities represented.—Texas (Brownsville, Victoria, Columbus, Houston).

Remarks.—This species is common throughout Central America, northern South America, and the West Indies. It has not been previously recorded from the United States. *Tachyporus brevis* Scriba is included as a synonym on the authority of the Junk and Schenkling catalog.

COPROPORUS LECONTEI, new name

1863. *Coproporus punctipennis* LECONTE, Smithsonian Misc. Coll., vol. 6, no. 167, p. 31. (Not Kraatz, 1859.)

1877. *Erchomus punctipennis* (LeConte), HORN, Trans. Amer. Ent. Soc., vol. 6, p. 107.

Black; antennae, trophi, and legs rufotestaceous. Head transverse, not abruptly declivous in front of the eyes; above impunctate, very minutely wrinkled, shining; beneath densely wrinkled; gula moderately wide and narrowed at middle. Antennae about as long as head and pronotum, feebly expanding distally but no segments transverse, eleventh equal to ninth and tenth together; finely pubescent from the fourth segment. Fourth segment of maxillary palpi longer than third, a little narrower at base than third and feebly conical. Pronotum minutely punctulate and very indistinctly and irregularly strigulose. Mesosternum carinate, carina elevated into a thin lamella nearly as high as long, abruptly terminated anteriorly. Surface of elytra uneven, finely and sparsely punctate, very indistinctly strigulose; sides without concavity except for a fine groove just at the edge; epipleurae free from inner face of elytra and nearly horizontal. Abdomen distinctly margined; sparsely punctured and strigulose above and beneath. Eighth tergite of male with four short equal triangular lobes, the middle pair separated by a rounded excision, laterals somewhat anterior; eighth sternite triangularly notched,

the notch slightly wider than deep, apex angular; seventh sternite very broadly and feebly emarginate throughout its width. Eighth tergite of female 4-lobed, the lobes long and slender, the median pair a little longer and separated by a narrow acute excision; eighth sternite with six lobes, the median pair longest and each bearing two spinules at tip, laterals blunt and each bearing a stout spine.

Type locality.—Valley of the Gila River, Ariz.

Lectotype.—Mus. Comp. Zool. no. 6497. Bears only a silver disk.

Localities represented.—Specimens have been seen also from Arizona (Tucson, Catalina Springs) and California (Hesperia, El Rio, Calaveras).

Remarks.—The three males in the Horn collection all have the sexual characters of *ventriculus*. The name used by LeConte for this species was preoccupied by Kraatz, who used it four years previously for a species from "India orientale."

COPROPORUS LAEVIS LeConte

1863. *Coproporus laevis* LECONTE. Smithsonian Misc. Coll., vol. 6, no. 167, p. 31.

1877. *Erchomus laevis* (LeConte), HORN, Trans. Amer. Ent. Soc., vol. 6, p. 108.

Piceous to picotestaceous; antennae, trophi, and legs testaceous. Head transverse, not abruptly declivous, triangular in front; smooth, shining, impunctate; gula wide in front and at rear, narrowed behind the middle; ventral surface strigulose. Antennae not quite so long as head and prothorax together, with segments 8-10 transverse, the eleventh not quite so long as the ninth and tenth together. Maxillary palpi unusually long, fourth segment longer than the third, as large at base, conical. Pronotum smooth, shining, impunctate. Mesosternum moderately carinate posteriorly. Elytral surface uneven, but shining, impunctate except at the sides; sides with a distinct concavity at middle above the margin; epipleurae free from inner surface of elytra but inflexed far above the horizontal position. Abdomen feebly margined, surface strongly but sparsely punctate throughout, strigulose. Eighth tergite of male with four triangular lobes, the median pair more posterior, separated by a narrowly rounded excision; eighth sternite with a broad triangular notch, one-quarter wider than deep, angles prominent. Eighth tergite of female with four slender elongate lobes, the median pair a little longer, all separated by acute incisures; eighth sternite with six lobes, the median pair much longer, broad, and armed with three or four spinules at tip, lateral lobes descending, each bearing a large black seta at apex.

Type locality.—Southern States. (The type specimen bears a small pink square, apparently indicating "Middle States.")

Lectotype.—Mus. Comp. Zool. no. 6498. Bears only a small pink square.

Localities represented.—In the present collections are specimens from Florida, Maryland, Virginia, Louisiana, Tennessee, Ohio, District of Columbia, Alabama, Texas, and Kansas. It has been recorded from Mexico and Indiana.

Remarks.—This is the only species in our region that has the head, pronotum, and elytral disk totally devoid of punctation. It differs from *C. lecontei*, new name (*punctipennis* of LeConte), also in the development of the mesosternal carina, the lateral impression of the elytra, the inflection of the epipleurae, and minor characters of the eighth abdominal segment.

COPROPORUS SPARSUS, new species

Piceous; antennae, trophi, and legs testaceous. Head oval, slightly transverse, obtusely triangular in front; surface shining, impunctate above. Antennae not quite so long as head and prothorax, gradually expanded but only the ninth and tenth transverse, together as long as the eleventh. Gula broad, narrowed at middle. Maxillary palpi stout, fourth segment a little longer than third, about as large at base, conical. Pronotum smooth, shining, impunctate. Mesosternum moderately carinate posteriorly. Elytral surface uneven but shining, sparsely and irregularly but distinctly punctured; flattened at sides but not distinctly concave; epipleurae inflexed almost against the inner face of elytra. Abdomen feebly margined, strongly retracted, sparsely but coarsely punctured throughout, strigulate. Male unknown. Eighth tergite of female with four long, slender lobes, the median pair a little longer; eighth sternite with six lobes, the median pair longer and each bearing two curved spinules.

Type locality.—Fort Grant, Ariz.

Types.—Holotype (a female from Fort Grant, Ariz., 12.7, collection of Hubbard and Schwarz), U.S.N.M. no. 51076; one paratype (same data) in the collection of the writer.

This species was recognized as new by Schwarz and was so labeled by him in the Hubbard and Schwarz collection.

COPROPORUS INFLATUS (Horn)

1877. *Erchomus inflatus* HORN, Trans. Amer. Ent. Soc., vol. 6, p. 107.

Piceous to rufopiceous; base of antennae, trophi, and legs testaceous; elytra and sides of pronotum generally rufous. Head transverse, abruptly narrowed before the eyes but produced at middle and not declivous; surface shining but distinctly strigulose, impunctate; gula wide but strongly narrowed at middle, smooth and convex; sur-

face beneath strigulose. Antennae about as long as head and prothorax; segments 8-10 about as wide as long, eleventh not equal to ninth and tenth together. Maxillary palpi long and slender, last segment nearly twice as long as third, as large at base, freely conical. Pronotum shining, impunctate, but distinctly strigulose. Mesosternum strongly carinate. Elytra punctate³ and strongly strigulose; not impressed at the sides; epipleurae free but inflexed far above the horizontal position. Abdomen feebly margined; coarsely but sparsely punctured throughout and strigulose. Eighth tergite of male with four slender lobes, the median pair longer and separated by a triangular incisure; eighth sternite with an acute triangular notch, about as wide as deep, angles produced into slender lobes. Eighth tergite of female with four long slender lobes, the median pair a little longer, all separated by acutely rounded excisions wider than the lobes; eighth sternite with six lobes, the two median pairs long and slender, the middle pair armed each with two curved spinules, the others bearing each a long black seta.

Type locality.—Camp Grant, Ariz.

Lectotype.—Acad. Nat. Sci. Philadelphia no. 3140. A male labeled "Ariz."

Localities represented.—Specimens from the following additional localities have been seen: Arizona (Tucson), California, and Texas.

Remarks.—This species is almost certainly involved in the synonymy of the tropical American species *flavipalpis* Sharp, *ventralis* Sharp, *gravidus* Sharp, *ignavus* Sharp, *rotundatus* Sharp, *elatus* Erichson, and *convexus* Erichson.

COPROPORUS ARIZONAE, new species

Piceous; antennae, trophi, legs, and sides of pronotum testaceous. Head transverse, triangular in front; smooth, shining, impunctate above; gula wide, but short and rapidly narrowed posteriorly. Antennae nearly as long as head and prothorax, segments not transverse, eleventh subequal to ninth and tenth together. Maxillary palpi stout, fourth segment slender, small at base and one-half longer than third. Pronotum shining, impunctate, but with exceedingly minute surface irregularities. Mesosternum strongly carinate posteriorly, the carina forming a thin lamella between the coxae and ending abruptly over the apex of the metasternum. Elytra shining, with surface slightly uneven, but not punctate;⁴ without concavity at the sides, but generally flattened, especially posteriorly; epipleurae inflexed very close to inner face of elytra. Abdomen feebly margined; sparsely and

³ The punctures are frequently obscured by the convergence of the strigulae.

⁴ With low magnification the elytra appear to be minutely punctured, but with the highest magnification obtainable they are seen to be merely slightly uneven.

coarsely punctate throughout, reticulate. Eighth tergite of male with four blunt lobes, the outer pair twice as long as the inner but not extending as far posteriorly, separated from the inner pair by deep incisures and each bearing a long black seta, the inner pair separated by a very short notch and each bearing a short pale seta; eighth sternite with a large notch, nearly semicircular owing to obliteration of the apical angle, a little wider than deep. Eighth tergite of female with six lobes, the outer one-half as long as the intermediate, each bearing a short pale seta, incisures all narrow and deep; eighth sternite with six blunt lobes, the median each bearing two curved spinules, the lateral four each with a long black seta.

Type locality.—Cave Creek, Chiricahua Mountains, Ariz.

Types.—Holotype (a female from Chiricahua Mountains, Ariz., 24.5 (May 24, 1897), collection of Hubbard and Schwarz), and 31 paratypes, U.S.N.M. no. 51078; four paratypes in the collection of the writer; paratypes from same locality and also Santa Rita Mountains and Catalina Mountains, Ariz.

Remarks.—Thirty-six specimens of this species were segregated in the Hubbard and Schwarz collection as "*Erchomus* n. sp." One specimen also bears the label "*Erchomus convexus* Lec." in Schwarz's handwriting. This is probably a mistake for *convexus* Erichson, but that species is quite distinct. One specimen from west of Beaver, Devils River, Tex., and one from Cordova, Veracruz, Mexico, are doubtfully referred to this species. They are paler and larger but do not seem to differ structurally.

COPROPORUS INFIMUS (DuVal)

1857. *Tachinus infimus* J. DUVAL in Sagra's Historia fisica, politica y natural de la isla de Cuba, Coleoptera, p. 33.

1863. *Coproporus infimus* (DuVal), CHEVOLAT and FAUVEL, Ann. Soc. Ent. France, ser. 4, vol. 3, p. 430.

1920. *Erchomus infimus* (DuVal), LENG, Catalog of the Coleoptera of America, north of Mexico, p. 111.

Piceous to piceotestaceous; antennae, trophi, legs, and apex of elytra paler. Head transverse, abruptly narrowed in front of the eyes but produced into a broad clypeal lobe between the antennae; shining, exceedingly minutely punctate; gula broader at base than apex but narrowed at anterior third; head beneath coarsely strigulose. Antennae about as long as head and prothorax, segments 7-10 transverse, eleventh about equal to ninth and tenth together. Pronotum smooth, shining, exceedingly minutely and sparsely punctured. Mesosternum feebly carinate posteriorly. Elytra smooth, shining, iridescent, very minutely and sparsely punctured similarly to the pronotum; sides explanate to form a broad marginal concavity extending throughout the length; epipleurae broad, free, and nearly horizontal.

Abdomen distinctly margined but generally much retracted and scarcely visible; moderately densely but not coarsely punctured throughout. Eighth tergite of male divided into three lobes, the median broad and feebly triangularly notched, the lateral pair with black setae; eighth sternite with a shallow triangular notch, two-thirds wider than deep, the angles rounded. Eighth tergite of female with four narrowed lobes, the median pair a little longer, the laterals bearing each a long black seta; eighth sternite with six lobes, the median four nearly equal, median two each bearing four spinules at tip; each lateral with a long black seta.

Type locality.—Cuba.

Localities represented.—This species has been found at the following localities in the United States: Florida (Crescent City, Biscayne, Indian River). It is a common Cuban species.

In the Hubbard and Schwarz collection this species was labeled by Schwarz as "*Erchomus* n. sp."